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Penicillin Therapy in Leptospirosis

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began to flow from the infected mammary tissue, but drainage was excellent, and slow sloughing with no increase in symptoms occurred.

Second Operation

Twelve days later the cow was again placed on the operating table and large portions of the necrotic mammary tissue including the left rear teat was removed. After this second operation the cow's appetite further improved and two weeks later it was discharged from the clinic. At that time the left side of the udder had been entirely sloughed and the remaining mammary tissue was greatly atrophied. The cow's condition had suffered surprisingly little considering the prolonged period of convalescence. This case is of interest since the surgical procedure employed effectively combatted an ascending gas gangrene infection caused by *Clostr. welchii*.

—Jack M. Nelson, '46

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Penicillin Therapy in Leptospirosis. Two dogs were entered at Stange Memorial Clinic in April of 1945. One, a five-year-old male Collie, showed symptoms of depression, erythema of the underline, congestion and mild icterus of the mucous membranes, diarrhea, loss of and perverted appetite, and cloudiness of the cornea of the left eye.

The Collie was at first believed to have Black Tongue, until a blood serum agglutination test proved the disease to be Leptospirosis. After the diagnosis of Leptospirosis had been made, the dog was given 50,000 units of penicillin intramuscularly into the gluteal region, and 50,000 units intravenously. For four days thereafter he was given 200,000 units of penicillin daily, in four divided doses. Two of these doses were given intravenously, and two were given intramuscularly. At the end of five day's treatment with penicillin the patient had improved so much, that no further treatment was needed, and five days later the patient had apparently recovered, and was discharged.

The other dog, a five-months-old male mixed-gray, entered the clinic several days before the Collie, with a previous history of refusal to eat and convulsions. He exhibited symptoms of straining, abdominal pain, vomition, and reddening of the skin in the perineal region. The condition was diagnosed as Leptospirosis on the findings of a blood serum agglutination test.

Treatment

A sedative was administered to the Mixed-gray dog, to relieve the abdominal pain, and convulsions. Bismuth subcarbonate was given the first day as an intestinal protective. After the results of the blood serum agglutination test were obtained, the patient was given 50,000 units of penicillin via the cephalic vein. The penicillin therapy was repeated four times a day for four days, and an intestinal protective was administered daily. At the end of four days time, the dog was apparently recovered, and the therapy was discontinued. Three days later the dog was discharged.

Agglutination Test

Both of these dogs were infected with *Leptospira canicola*, and the blood serum agglutination test employed is as follows.

1. Supplied known serum	2. Unknown serum 1:10
L. canicola antigen	L. canicola antigen
3. Unknown serum 1:100	4. Unknown serum 1:1000
L. canicola antigen	L. canicola antigen
5. Supplied known positive serum	6. Unknown serum 1:10
L. icterohemorrhagica antigen	L. icterohemorrhagica antigen
7. Unknown serum 1:100	8. Unknown serum 1:1000
L. icterohemorrhagica antigen	L. icterohemorrhagica antigen

These two cases were followed after being discharged, and both dogs have made a complete clinical recovery.

—Sam W. Thompson, '46